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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/671,634 | 09/28/2000 | Kenichi Nakamura | 012777-039 | 7050 |

21839 7590 01/02/2004

BURNS DOANE SWECKER & MATHIS L L P
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EXAMINER

DUDEK, JAMES A

ART UNIT PAPER NUMBER

2871

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AW

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/671,634 | NAKAMURA ET AL. | |
| | Examiner | Art Unit | |
| | James A. Dudek | 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 9845734 ("734"). The EP 1 022 587 is the English version of 734 and is referred to below.

Per claim 11, 734 teaches an anti-reflection film comprising a low refractive-index layer, having a refractive index of 1.30 to 1.55 [see abstract, the refractive index is between 1.20 and 1.55], which comprises from 50 to 95% by weight of short fibrous inorganic fine particles [see abstract], and from 5 to 50% by weight of a polymer, wherein there are micro voids formed among the short fibrous inorganic fine particles [see abstract]. Note that overlapping ranges are at least obvious.

Per claim 12, 734 teaches wherein the short fibrous inorganic fine particles comprises silica [see paragraph 105] and the low refractive index layer has a void ratio of 1-50 percent by volume [see paragraph [see paragraph 110].

Per claim 13, 734 teaches the anti-reflection film as claimed in claim 11, wherein the short fibrous inorganic fine particles are substantially crosslinked [see figures].

Per claims 14-16, 734 teaches a high-refractive index layer comprising from 5-65 percent by volume of inorganic fine particles that have an average size 1-200 nm [see paragraph 37] and from 35-95 percent by volume of crosslinked polymer having an anionic group [see paragraph 88-96].

Per claim 17, see paragraph 42.

Per claim 18, this is product by process limitation and will not distinguish over the prior art, see MPEP 2100.

Per claim 19, see paragraphs 44 and 48.

Per claims 20-23, see paragraph 182.

Per claim 24, 734 teaches an image display device equipped with the antireflection film as claimed in claim 1 or 11 on an image display surface [this claim is merely intended use and as such is not further limiting].

Allowable Subject Matter

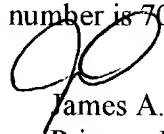
Claims 1-10 are allowed.

The prior art of record teaches an anti-reflection film, which is formed by laminating a high refractive-index layer, having a refractive index of 1.65 to 2.40, and a low-refractive index layer, having a refractive index of 1.30 to 1.55, wherein the high-refractive-index layer comprises 5 to 65% by volume of inorganic fine particles having an average particle size of 1 to 200 nm, and 35 to 95% by volume of a polymer composed of an organic compound. The prior art fails to teach or suggest in combination with the above limitations the particles having a core/shell structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 308-4782. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7721 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



James A. Dudek
Primary Examiner
Art Unit 2871

December 29, 2003